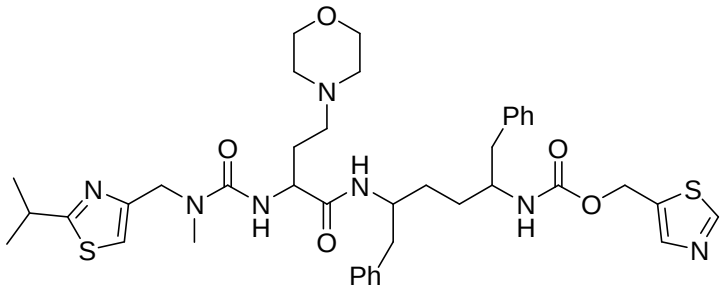
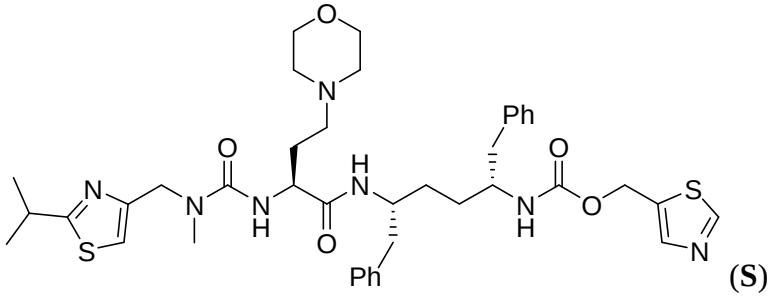
THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A pharmaceutical composition comprising a compound of formula:



or a pharmaceutically acceptable salt thereof, in combination with two or three additional therapeutic agents selected from HIV protease inhibiting compounds, HIV non-nucleoside inhibitors of reverse transcriptase, HIV nucleoside inhibitors of reverse transcriptase, HIV nucleotide inhibitors of reverse transcriptase, HIV integrase inhibitors, gp41 inhibitors, CXCR4 inhibitors, entry inhibitors, gp120 inhibitors, G6PD and NADH-oxidase inhibitors, CCR5 inhibitors, other drugs for treating HIV, capsid polymerization inhibitors, interferons, ribavirin analogs, NS5b polymerase inhibitors, NS3 protease inhibitors, alpha-glucosidase 1 inhibitors, hepatoprotectants, non-nucleoside inhibitors of HCV, and other drugs for treating HCV.

2. The pharmaceutical composition of claim 1, wherein the compound is of the formula (S):



(**S**)

or a pharmaceutically acceptable salt thereof.

3. The pharmaceutical composition of claim 1, wherein the two or three additional therapeutic agents are selected from the group consisting HIV protease inhibitors, HIV non-nucleoside inhibitors of reverse transcriptase, HIV nucleoside inhibitors of reverse transcriptase, HIV nucleotide inhibitors of reverse transcriptase, and HIV integrase

inhibitors.

4. The pharmaceutical composition of claim 1, wherein the two or three additional therapeutic agents are selected from the group consisting of tenofovir disoproxil fumarate, GS-9131, emtricitabine, elvitegravir, efavirenz, atazanavir, darunavir, raltegravir, rilpivirine, and GS-7340.

5. The pharmaceutical composition of claim 2, comprising a combination selected from the group consisting of:

Formula S/tenofovir disoproxil fumarate/GS-9131;
Formula S/tenofovir disoproxil fumarate/emtricitabine;
Formula S/tenofovir disoproxil fumarate/elvitegravir;
Formula S/tenofovir disoproxil fumarate/efavirenz;
Formula S/tenofovir disoproxil fumarate/atazanavir;
Formula S/tenofovir disoproxil fumarate/darunavir;
Formula S/tenofovir disoproxil fumarate/raltegravir
Formula S/tenofovir disoproxil fumarate/rilpivirine;
Formula S/GS-9131/emtricitabine;
Formula S/GS-9131/elvitegravir;
Formula S/GS-9131/efavirenz;
Formula S/GS-9131/atazanavir;
Formula S/GS-9131/darunavir;
Formula S/GS-9131/raltegravir;
Formula S/GS-9131/rilpivirine;
Formula S/emtricitabine/elvitegravir;
Formula S/emtricitabine/efavirenz;
Formula S/emtricitabine/atazanavir;
Formula S/emtricitabine/darunavir;
Formula S/emtricitabine/raltegravir;
Formula S/emtricitabine/rilpivirine;
Formula S/elvitegravir/efavirenz;
Formula S/elvitegravir/atazanavir;

Formula S/elvitegravir/darunavir;
Formula S/elvitegravir/raltegravir;
Formula S/elvitegravir/rilpivirine;
Formula S/efavirenz/atazanavir;
Formula S/efavirenz/darunavir;
Formula S/efavirenz/raltegravir;
Formula S/efavirenz/rilpivirine;
Formula S/atazanavir/darunavir;
Formula S/atazanavir/raltegravir;
Formula S/atazanavir/rilpivirine;
Formula S/darunavir/raltegravir;
Formula S/darunavir/rilpivirine; and
Formula S/raltegravir/rilpivirine.

6. The pharmaceutical composition of claim 2, comprising a combination selected from the group consisting of:
Formula S/tenofovir disoproxil fumarate/elvitegravir;
Formula S/GS-9131/elvitegravir; Formula S/emtricitabine/elvitegravir;
Formula S/elvitegravir/efavirenz;
Formula S/elvitegravir/atazanavir;
Formula S/elvitegravir/darunavir;
Formula S/elvitegravir/raltegravir; and
Formula S/elvitegravir/rilpivirine.

7. The pharmaceutical composition of claim 2, comprising a combination of Formula S/emtricitabine/GS-7340.

8. The pharmaceutical composition of claim 2, comprising a combination of Formula S/tenofovir disoproxil fumarate/elvitegravir.

9. The pharmaceutical composition of claim 2, comprising a combination of Formula S/emtricitabine/elvitegravir.

10. The pharmaceutical composition of claim 2, comprising a combination selected from the group consisting of:

Formula S/tenofovir disoproxil fumarate/GS-9131/emtricitabine;
Formula S/tenofovir disoproxil fumarate/GS-9131/elvitegravir;
Formula S/tenofovir disoproxil fumarate/GS-9131/efavirenz;
Formula S/tenofovir disoproxil fumarate/GS-9131/atazanavir;
Formula S/tenofovir disoproxil fumarate/GS-9131/darunavir;
Formula S/tenofovir disoproxil fumarate/GS-9131/raltegravir;
Formula S/tenofovir disoproxil fumarate/GS-9131/rilpivirine;
Formula S/tenofovir disoproxil fumarate/emtricitabine/elvitegravir;
Formula S/tenofovir disoproxil fumarate/emtricitabine/efavirenz;
Formula S/tenofovir disoproxil fumarate/emtricitabine/atazanavir;
Formula S/tenofovir disoproxil fumarate/emtricitabine/darunavir;
Formula S/tenofovir disoproxil fumarate/emtricitabine/raltegravir;
Formula S/tenofovir disoproxil fumarate/emtricitabine/rilpivirine;
Formula S/tenofovir disoproxil fumarate/elvitegravir/efavirenz
Formula S/tenofovir disoproxil fumarate/elvitegravir/atazanavir;
Formula S/tenofovir disoproxil fumarate/elvitegravir/darunavir;
Formula S/tenofovir disoproxil fumarate/elvitegravir/raltegravir;
Formula S/tenofovir disoproxil fumarate/elvitegravir/rilpivirine;
Formula S/tenofovir disoproxil fumarate/efavirenz/atazanavir;
Formula S/tenofovir disoproxil fumarate/efavirenz/darunavir;
Formula S/tenofovir disoproxil fumarate/efavirenz/raltegravir;
Formula S/tenofovir disoproxil fumarate/efavirenz/rilpivirine;
Formula S/tenofovir disoproxil fumarate/atazanavir/darunavir;
Formula S/tenofovir disoproxil fumarate/atazanavir/raltegravir;
Formula S/tenofovir disoproxil fumarate/atazanavir/rilpivirine;
Formula S/tenofovir disoproxil fumarate/darunavir/raltegravir;
Formula S/tenofovir disoproxil fumarate/darunavir/rilpivirine;
Formula S/tenofovir disoproxil fumarate/raltegravir/rilpivirine;
Formula S/GS-9131/emtricitabine/elvitegravir;
Formula S/GS-9131/emtricitabine/efavirenz;

Formula S/GS-9131/emtricitabine/atazanavir;

Formula S/GS-9131/emtricitabine/darunavir;

Formula S/GS-9131/emtricitabine/raltegravir;

Formula S/GS-9131/emtricitabine/rilpivirine;

Formula S/GS-9131/elvitegravir/efavirenz;

Formula S/GS-9131/elvitegravir/atazanavir;

Formula S/GS-9131/elvitegravir/darunavir;

Formula S/GS-9131/elvitegravir/raltegravir;

Formula S/GS-9131/elvitegravir/rilpivirine;

Formula S/GS-9131/efavirenz/atazanavir;

Formula S/GS-9131/efavirenz/darunavir;

Formula S/GS-9131/efavirenz/raltegravir;

Formula S/GS-9131/efavirenz/rilpivirine;

Formula S/GS-9131/atazanavir/darunavir;

Formula S/GS-9131/atazanavir/raltegravir;

Formula S/GS-9131/atazanavir/rilpivirine;

Formula S/GS-9131/darunavir/raltegravir;

Formula S/GS-9131/darunavir/rilpivirine;

Formula S/GS-9131/raltegravir/rilpivirine;

Formula S/emtricitabine/elvitegravir/efavirenz;

Formula S/emtricitabine/elvitegravir/atazanavir;

Formula S/emtricitabine/elvitegravir/darunavir;

Formula S/emtricitabine/elvitegravir/raltegravir;

Formula S/emtricitabine/elvitegravir/rilpivirine;

Formula S/emtricitabine/efavirenz/atazanavir;

Formula S/emtricitabine/efavirenz/darunavir;

Formula S/emtricitabine/efavirenz/raltegravir;

Formula S/emtricitabine/efavirenz/rilpivirine;

Formula S/emtricitabine/atazanavir/darunavir;

Formula S/emtricitabine/atazanavir/raltegravir;

Formula S/emtricitabine/atazanavir/rilpivirine;

Formula S/emtricitabine/darunavir/raltegravir;

Formula S/emtricitabine/darunavir/rilpivirine;
Formula S/emtricitabine/raltegravir/rilpivirine;
Formula S/elvitegravir/efavirenz/atazanavir;
Formula S/elvitegravir/efavirenz/darunavir;
Formula S/elvitegravir/efavirenz/raltegravir;
Formula S/elvitegravir/efavirenz/rilpivirine;
Formula S/elvitegravir/atazanavir/darunavir;
Formula S/elvitegravir/atazanavir/raltegravir;
Formula S/elvitegravir/atazanavir/rilpivirine;
Formula S/elvitegravir/darunavir/raltegravir;
Formula S/elvitegravir/darunavir/rilpivirine;
Formula S/elvitegravir/raltegravir/rilpivirine;
Formula S/efavirenz/atazanavir/darunavir;
Formula S/efavirenz/atazanavir/raltegravir;
Formula S/efavirenz/atazanavir/rilpivirine;
Formula S/efavirenz/darunavir/raltegravir;
Formula S/efavirenz/darunavir/rilpivirine;
Formula S/efavirenz/raltegravir/rilpivirine;
Formula S/atazanavir/darunavir/raltegravir;
Formula S/atazanavir/darunavir/rilpivirine; and
Formula S/darunavir/raltegravir/rilpivirine.

11. The pharmaceutical composition of claim 2, comprising a combination selected from the group consisting of:

Formula S/tenofovir disoproxil fumarate/GS-9131/elvitegravir;
Formula S/tenofovir disoproxil fumarate/emtricitabine/elvitegravir;
Formula S/tenofovir disoproxil fumarate/ elvitegravir/efavirenz;
Formula S/tenofovir disoproxil fumarate/elvitegravir/atazanavir;
Formula S/tenofovir disoproxil fumarate/elvitegravir/darunavir;
Formula S/tenofovir disoproxil fumarate/ elvitegravir/raltegravir;
Formula S/tenofovir disoproxil fumarate/elvitegravir/rilpivirine;
Formula S/GS-9131/elvitegravir/efavirenz;

Formula S/GS-9131/elvitegravir/atazanavir;
Formula S/GS-9131/elvitegravir/darunavir;
Formula S/GS-9131/elvitegravir/raltegravir;
Formula S/GS-9131/elvitegravir/rilpivirine;
Formula S/emtricitabine/elvitegravir/efavirenz;
Formula S/emtricitabine/elvitegravir/atazanavir;
Formula S/emtricitabine/elvitegravir/darunavir;
Formula S/emtricitabine/elvitegravir/raltegravir;
Formula S/emtricitabine/elvitegravir/rilpivirine;
Formula S/elvitegravir/efavirenz/atazanavir;
Formula S/elvitegravir/efavirenz/darunavir;
Formula S/elvitegravir/efavirenz/raltegravir;
Formula S/elvitegravir/efavirenz/rilpivirine;
Formula S/elvitegravir/atazanavir/darunavir;
Formula S/elvitegravir/atazanavir/raltegravir;
Formula S/elvitegravir/atazanavir/rilpivirine;
Formula S/elvitegravir/darunavir/raltegravir;
Formula S/elvitegravir/darunavir/rilpivirine; and
Formula S/elvitegravir/raltegravir/rilpivirine.

12. The pharmaceutical composition of claim 2, comprising a combination selected from the group consisting of:
Formula S/elvitegravir/emtricitabine/GS-7340;
Formula S/darunavir/emtricitabine/GS-7340; and
Formula S/atazanavir/emtricitabine/GS-7340.

13. The pharmaceutical composition of claim 2, comprising a combination of Formula S/tenofovir disoproxil fumarate/emtricitabine/elvitegravir.

14. The pharmaceutical composition of any one of claims 1-13 for use improving the pharmacokinetics of a drug which is metabolized by cytochrome P450 monooxygenase, increasing the blood plasma level of a drug which is metabolized by cytochrome P450

monooxygenase, inhibiting cytochrome P450 monooxygenase, treating an HIV infection, or treating an HCV infection in a human patient.

15. The pharmaceutical composition of claim 14 for use in treating an HIV infection or HCV infection in a human patient.

16. The pharmaceutical composition of claim 14 for use in treating an HIV infection in a human patient.